

WHAT IS CLAIMED IS:

1. A light-receiving element, comprising:  
a base member provided over a light-receiving surface; and  
an optical element provided on the top surface of the base member.
2. The light-receiving element according to claim 1, the base member being made of material passing light of a predetermined wavelength.
3. The light-receiving element according to claim 1, the optical element functioning as a lens.
4. The light-receiving element according to claim 1, the optical element functioning as a polarizing element.
5. The light-receiving element according to claim 1, the optical element being a spherical shape or an elliptical spherical shape.
6. The light-receiving element according to claim 1, the optical element being a cut spherical shape or a cut elliptical spherical shape.
7. The light-receiving element according to claim 1, the cross section of the optical element being circular or elliptical.
8. The light-receiving element according to claim 1, a sealing agent being formed so as to, at least, partially cover the optical element.
9. The light-receiving element according to claim 1, the top surface of the base member being circular or elliptical.
10. The light-receiving element according to claim 1, the top surface of the base member being curved.
11. The light-receiving element according to claim 1, the angle, formed between the top surface of the base member and the surface of the side wall of the base member that contact the top surface, being acute.
12. The light-receiving element according to claim 1, the upper portion of the base member being formed into an inverse taper.
13. The light-receiving element according to claim 1, the light-receiving element being a photodiode.
14. A light-receiving element, comprising:  
a columnar part provided on a semiconductor substrate;  
a light-receiving surface provided on the top surface of the columnar part;  
a base member provided over the light-receiving surface; and  
an optical element provided on the top surface of the base member.

15. A light-receiving element, comprising:
  - a columnar part provided on a semiconductor substrate;
  - a light-receiving surface provided on the back surface of the semiconductor substrate;
  - a base member provided over the light-receiving surface; and
  - an optical element provided on the top surface of the base member.
16. The light-receiving element according to claim 14, the columnar part including a first conductive type layer, a light-absorbing layer and a second conductive type layer, with the light-absorbing layer being formed between the first conductive type layer and second conductive type layer.
17. The light-receiving element according to claim 1, the base member functioning as an anti-reflective layer.
18. The light-receiving element according to claim 1, the base member being composed of a semiconductor layer.
19. The light-receiving element according to claim 1, the base member being composed of an insulating material that is silicon oxide or silicon nitride.
20. An optical module, comprising:
  - the light-receiving element according to claim 1; and
  - a light guide.
21. An optical transmitting device, comprising the optical module according to claim 20.
22. A method of manufacturing a light-receiving element, comprising:
  - (a) forming a base member over a light-receiving surface;
  - (b) forming an optical element precursor by discharging droplet to the top surface of the base member; and
  - (c) forming an optical element by curing the optical element precursor.
23. The method of manufacturing light-receiving element according to claim 22, wherein in (a), the base member is formed of a material passing light of a predetermined wavelength.
24. The method of manufacturing light-receiving element according to claim 22, wherein in (a), the base member is formed so that the angle, formed between the top surface of the base member and the surfaces of the side wall of the base member that contact the top surface, is acute.

25. The method of manufacturing light-receiving element according to claim 22, wherein in (a), the upper portion of the base member is formed into an inverse taper.

26. The method of manufacturing light-receiving element according to claim 22, further comprising:

(d) adjusting the wettability of the top surface of the base member with respect to the droplet, prior to (b).

27. The method of manufacturing light-receiving element according to claim 22, further comprising:

(e) covering the optical element, at least, partially with a sealing agent.